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AUTHOR Mullen, Gregory J.
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ABSTRACT

This study was done in response to calls for histories of the curriculum field. Ideas within three subareas of the curriculum--design, engineering (planning, implementation, and evaluation), and theory--were analyzed, related to earlier and later work, and critically reviewed for their contributions to the field. Criteria were established for selecting the most influential major works addressed to the three subareas. Progress was noted in curriculum design and planning, although much research is needed to test assumptions. Curriculum evaluation and theory have recently emerged and show great promise. Curriculum implementation remains the least investigated area. (Author)

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HISTORY AND ANALYSIS OF CURRICULUM THOUGHT, 1940-1975

Gregory J. Mullen
Highland Park, Illinois Public Schools

I. THE PROBLEM

Curriculum as a separate field of study is relatively new. Yet it is old enough to need historical treatment. This historical work has been neglected, as many have pointed out.[1] At the 1974 meeting of AERA, O.L. Davis called for curriculum histories in five areas: 1) the history of patterns of adaption and adaptation of specific curriculum programs, from McGuffey's readers to the BSCS; 2) the impact of authoritative proposals for the school program, such as the efficiency movement, the Conant proposals, and the Seven Cardinal Principles; 3) the relationship between the curriculum development theories of the 1930's and actual curriculums developed; 4) the evolution of the curriculum over time in individaul schools; and 5) the influence of individual people on curriculum. Davis noted that Seguel's was the only general work on this

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topic that has yet appeared.[2] There have been works on individuals or on specific topics. But no work has treated the general topic of ideas on curriculum covering the years since 1940.

II. DESIGN AND PROCEDURES

Seguel treated the formative years of the curriculum field, 1890 to 1940. During this time contributions to the field were relatively few, and the boundaries of the field were being developed. In this context, a small group of individuals virtually embodied the field. Seguel's study appropriately was organized around the development of the thoughts on curriculum of seven exemplars: Charles and Frank McMurry, Dewey, Bobbitt, Charters, Rugg, and Caswell. After 1940, the field was more established, and the participants more numerous. This study, thus, was organized around the contributions of a number of individuals to various aspects of curriculum as a field of study. The field, not the individuals, provided the framework.

The framework chosen was taken from Beauchamp.[3] Curriculum is divided into three areas. 1) Curriculum design has two facets. First, it is the selection of subject matter to be taught in the school. Secondly, it is the way this subject matter is organized, such as into separate subjects or into some form of integrated design. Sequence, grade placement, and vertical and horizontal articulation are areas that may also be treated in a curriculum design proposal. 2) Curriculum engineering consists in the tasks involved in the administration of the curriculum. There are three major categories of these tasks. First, curriculum planning involves the procedures for selecting and organizing the contents of the curriculum, which may appear as a written document.

Second, curriculum implementation involves ways of getting the planned curriculum actually used as a point of departure for developing instructional plans. Third, curriculum evaluation involves assessing the worth of the planned curriculum. This may go beyond measurement of pupil achievement outcomes to assessment of the extent to which the curriculum really grows out of the goals of the school group, the usefulness of its design as a point of departure for teaching, and assessment of the efficiency of the curriculum engineering system, including the evaluation program itself. 3) Curriculum theory concerns the same activities that any theorist engages in: definition of terms, classification of knowledge, generalizing from inferential and predictive research, and the development of sub-theories and models.

For this study major proposals in these three areas of curriculum that appeared from 1940-1975 were analyzed. There were five main limitations on materials selected for review. First, the study was limited to major works that addressed the field of curriculum as defined above. A thorough search of the various indexes and bibliographies was conducted. From the list compiled, those works were selected for review that had wide notice, contained some original contribution and were not totally reviews of other works, and were comprehensive treatments of curriculum or an aspect thereof. Thus, the ideas reviewed were taken primarily, but not exclusively, from full length books. Although subjective judgments played a necessary part in this selection process, it is believed that contributions from works not selected consist in duplication of or variation on the major themes here discussed.

Secondly, the treatment of the content aspect of curriculum design was limited to a discussion of the proposals for broad content

areas. Highly detailed studies of individual subject matter areas, an important part of curriculum design, were not included. In general, this topic is more properly the province of specialists in the specific content areas.

Third, the study did not treat the portions of curriculum books devoted to instruction, except where authors discussed the juncture of the curriculum and instruction systems. The ideas of what to teach and of how to teach it were treated as conceptually distinct.

Fourth, the education foundations, philosophical, sociological, psychological, and historical, while they often appeared in curriculum books, were not treated in great detail. If positions on one or more of these areas were important input to curriculum ideas being discussed, that connection was made clear.

And finally, this was not a study of curriculum in the schools but of scholarly proposals. Consequently, trends in schools were mentioned only as they had a bearing on trends in the proposals themselves.

III. IDEAS ON CURRICULUM SINCE 1940

1940 to 1949

The year 1940 marked the end of what Seguel called "the formative years." A major characteristic of this period was that it held the seeds of the demise of the progressive education movement. During the 1940's, membership in the Progressive Education Association was in a permanent decline. Experimentation was curtailed by the war, and all areas of society were touched by a conservative trend in thinking. But for the time being, Progressivism dominated the literature on curriculum. It was not until 1949 that the opposition became highly vocal.[4]

Curriculum design. The traditional and progressive outlooks on curriculum design in the 1940's were reflections of the continuing conflict between the tradition of idealism and classical humanism, voiced by Harris, Bobbitt, and others, and experimentalism and the pragmatic theory of knowledge, espoused by James, Dewey, and others.[5]

The traditional outlook on curriculum content emphasized permanence and changelessness. There was a belief in a stable cultural heritage which needed to be acquired by children in order to make them civilized. The Classics were the common knowledge of civilized men, and knowledge of the Classical languages allowed for reading the Classical authors in the original. Beside this, the Classical languages and mathematics were food for training the mind. Subject matter had deferred value rather than immediate applicability. A good education also consisted in breeding a child in the culture and mores of society in order to make him a functioning member, as well as teaching him the changeless values. ocational training did not contribute to a good education.

The progressive notion, on the other hand, stated that what is classical today was once current, that the usefulness of subject matter passes and it must be replaced from time to time. This notion questioned the assumed mental discipline value of certain subjects, and stressed the immediate or proximate utility of learning. The child's needs and felt interests were accepted as valid educational criteria. The progressives posited a need for a child to adjust to a changing society and culture, and looked to education and the educated as instruments of change in society. They accepted vocational training as a valid function of schooling. This point of view sometimes resulted in different subject matter areas for the curriculum than did the traditional, but

more often resulted in the same general areas, but differed in the manner of their treatment.

In the organization of curriculum content there also were polar views. Before the 1940's, a good number of proposals had been discussed. In 1941 Hopkins brought some order to the situation by listing the various types of design along a continuum, and discussed the characteristics of each.[6] At one end of the design continuum was the subject curriculum. The subjects to be learned are separate and distinct; relating is negligible. Next came designs with a degree of fusion, variously called correlated, coordinated, etc. They involved minimal relating between subjects within a field (as history and geography of China), across fields (as the history and music of colonial America), or relating subjects to life outside the school. In the center were broad fields designs, in which many small subjects are permanently grouped into a few broad areas such as social studies, language arts, etc. The continuum then moved into the experience designs. Moderate experience designs might have divided into broad fields of the experience type (Social Living, Language Arts, Individual Help and Guidance, etc.) or a core of Functions of Social Living, Life Problems, etc. Finally, in the extreme experience design there is no set pattern. Teachers and students make their own plans from day to day. All of the experience-type designs were experimented with on a relatively small scale between 1900 and 1940. The subject curriculum remained dominant in the schools throughout.

Not so in the literature, however. Despite the low level of activity during the war years, the progressives were confident and forward looking through the 1940's. There was, however, one notable expression of a traditional outlook in design. For Morrison, the con-

tent of the curriculum was the content of culture or civilization.[7] The curriculum was everywhere the same, because man was everywhere the same, and there was only one true form of civilization. The object of the curriculum is to conform the child to the culture, whether he agrees or not. Morrison presumed the sufficiency and desirability of the separate-subjects design.

By 1940, progressive curriculum writers had generally adopted an experience notion of curriculum after the ideas of Dewey. However, it was one thing to accept Dewey's notion that the old subject conception of the curriculum was too narrow, and quite another to formulate an experience definition of curriculum that was precise and useful for curriculum makers. Some definitions had gotten so broad that they included aspects of a child's experience totally beyond the school's reach. And no definition had sufficient precision and clarity that it could be communicated in unambiguous terms. Words like "experience," activity," and "needs" were used in the newer conceptions. But all curriculums, old and new, involved experiences and activities, and were based on someone's idea of the child's needs.

Progressive definitions of "curriculum" in the 1940's were of two main types. One group of progressives included all school experiences in the curriculum. Alberty advocated a "core" of learnings for the secondary school based on personal and social problems, to be pursued through an experience design, and supplemented by special and vocational subjects.[8] Lee and Lee included psychological and personality goals in their curriculum.[9] Spears[10] and Gwynn[11] conceived of a curriculum inclusive of extra-curricular activities in which course-of-study construction would play only a small part.

Another group of progressives limited the curriculum to experiences related to relevant problems of life. Stratemeyer's idea was that the ". . . content of the curriculum consists of the every day problems of learners seen in the light of the persistent life situations of which They are a part."[12] The content consisted of any class or extra-class activities that applied to the persistent life situations determined to be relevant to a particular group of children, planned in their details in cooperation with the pupils. Bobbitt believed in the pursuit of the "good life" through the curriculum.[13] Science could determine the broad outlines of activities appropriate for certain age levels. But each pupil, with guidance, had to plan his own individual curriculum, covering all aspects of life, in work and play.

Hopkins was not specific as to content, believing that exact experiences are to be selected democratically with the pupils, and organized as realistic activities. He did list six "habits and skills" to be acquired: 1) cooperating in the interactive process; 2) acting on thinking; 3) selecting better needs and purposes on which to work; 4) managing experiences intelligently; 5) respecting the personality of others; 6) evaluating learning in the process of experiencing. Hopkins at length defended the experience design as the only one appropriate to a democratic civilization.[14]

In summary, the major arguments in the 1940's over content centered around its utility, immediacy of application, and responsiveness to the child's felt interests and needs. This argument involved not only the inclusion or exclusion of whole areas of content (such as vocational training, health care, and personal relations), but the manner of treatment of traditional subjects. The preponderance of opinion in the literature continued to favor the progressive notion. Additionally, the

inclusion of religion in the curriculum was still being advocated by some, progressives as well as traditionalists.

In content organization, the dominant pattern was an attack on the separate-subjects design, in favor of experience notions. The latter ranged from designs drawing on the traditional areas as they applied to situations at hand, to totally experience-based notions following each individual child's needs and interests. Progressive ideas, for the time being, remained the conventional wisdom of the educational establishment, in the literature and in official pronouncements if not in practice.

Curriculum engineering proposals. Koopman, commenting on the early decades of this century, distinguished between curriculum revision and curriculum development. He saw curriculum revision at its peak in the early 1920's, and serving as a transition to real curriculum development. This latter procedure, he said, must improve the teaching-learning process designedly, systematically, cooperatively, and continuously.[15] By 1940, curriculum planning ideas had evolved so as to produce a number of fairly comprehensive works on the subject. But systematic plans for implementing curriculums were lacking. Likewise, there were no plans for curriculum evaluation beyond improvement in assessing pupil outcomes and general inspections by accrediting associations.

There was not a great deal of additional material produced on the subject of curriculum engineering in the 1940's. A few authors included sections in curriculum books on curriculum engineering. Hopkins saw curriculum designing, or planning, as the activity of the pupil, with adult guidance, expressing his purposeful need, selecting and organizing materials to meet this need, and continuously developing unity

in these materials. He also contributed to the ongoing call for curriculum evaluation to go beyond facts and skills. He suggested looking at other outcomes, such as emotion, individuality, values, and personality integration.[16]

Stratemeyer had a similar view of planning, but she would take more care to attend to: transient versus lasting needs; continuous growth; balance; avoidance of overlap; group versus individual needs; the different concerns of general and special education; vertical articulation; and the need for basic skills. Evaluation consisted in continuous assesment of the student's ability to deal with persistent life situations, by means of cumulative records. Improved guidance of the learner is the object.[17]

Alberty's proposal was for an all-school engineering system. His step-by-step planning procedure included: 1) formulation of the school's philosophy by staff, community, and students; 2) study of the child, his needs, problems and interests; and 3) selection of learning activities and subjects with democratic participation. He likewise had an organized evaluation scheme, to assess: relevance of the philosophy; consistency of purposes; effectiveness of the curriculum in meeting needs, abilities and interests of students; and appropriateness of teaching procedures.[18]

Miel wrote a unique work on curriculum change as a social process. She advocated guarantees of security, individual and group growth, and accomplishment, balancing gradualism and rapidity. She also discussed controlling motivation, the condition of the group endeavor, the extent of democratic participation, and quality of leadership.[19]

In the 1940's there were no new fully worked out proposals for

curriculum systems. Rather, there were small contributions and continued discussions that became the groundwork for major works of the 1950's. The individual school was most often advocated as the arena for planning. Highly progressive planning proposals ranged from pupil-shared planning based on frameworks carefully constructed beforehand, to full pupil participation. But in general, there was a campaign of involvement of many groups in the process of curriculum planning. Implementation ideas were few, and consisted mostly of plans for in-service work with teachers, and involving pupils in implementing the curriculum they had helped plan. The development of a broad view of evaluation continued, using a variety of techniques and aimed toward assessing how well needs were being met and purposes fulfilled. Finally, Miel stressed the significance of the study of group dynamics for the curriculum system.

Curriculum theory. Real theoretical activity is a sophisticated pursuit, applicable only to areas of knowledge that have advanced well beyond the formative stage. The definition of theory is a debated topic, but it is generally accepted that a theory performs the functions of organized description, explanation, and prediction.[20] In this light, it may be argued that there was no fully theoretical activity in curriculum before 1950.

Two rudimentary theoretical activities are definitions of terms and classification of knowledge. Several authors in the 1940's, while falling far short of full scale works on curriculum theory, did engage in this kind of groundwork. Hopkins' discussion of the various types of curriculum design, discussed earlier, is an example of this fundamental activity.[21] Spears in 1940 also set up a continuum of curriculum designs.[22]

Gwynn wrote a chapter on the technical vocabulary of the curriculum.[23] He stated the current progressive notion of "curriculum" as the totality of curriculum and extra-curricular experiences of the child. He also gave his view of: core curriculum; correlation (interrelation); fusion; aims; purposes; objectives; experience activities; subject matter and subject matter areas. Gwynn cannot be said to have made a large contribution to curriculum theory in this volume. He did formally acknowledge that the field of curriculum has a technical vocabulary, words that either are not in common usage or which have special meanings. He acknowledged that in a field in which common agreement on the definitions of terms has not been reached, writers must at least set forth the meanings of words as they intend to use them.

1950 to 1958

The year 1950 marked a turn in the character of the curriculum field. The pace of writing increased dramatically. Whereas during the 1940's major curriculum works appeared at the rate of about one a year, in 1950 there were no less than six. Vocal and written opposition to progressive education increased greatly, and by 1956 the Progressive Education Association had dissolved. But there was no wholesale abandonment of progressive curriculum proposals in the literature. Several authors reiterated their proposals of the 1940's in updated editions. But a number of authors were more moderate and eclectic, and acknowledged that academics in the curriculum needed strengthening.

Curriculum design. Curriculum design proposals were of two types during the years 1950 to 1958. A few progressives maintained their advocacy of experience-centered designs.[24] More common was an intermediate approach, involving either a mixture of designs, or an alternating among designs

for different purposes. But nearly all writers included in their content such non-academics as emotional health, personality development, ethical behavior, aesthetic development, etc. However, this second group made more of the need to avoid neglecting academics.

Smith, Stanley, and Shores directly addressed one of the basic arguments carried on in the progressive period, that of the child-centered versus the society-centered bases for curriculum design.[25] They discussed the merits of each approach and made a strong case for an interactive position. They thus exemplified a moderating trend in Progressivism that was to characterize many works in this period.

The significance of this position for curriculum design is that, first of all, the present felt needs of the child cannot be the only determiner of content, because needs are lacks as well as desires. The activity design is the one most appropriate to the interactive position, centered around activities directly related to the major concerns of group life, home life, the natural world, social experiences, etc.

The core curriculum continued to be widely discussed during these years. It had begun as an attack on the problem of providing a common body of learnings, and had evolved into a complex issue ranging from philosophy to instructional techniques. Venable listed the common element of core proposals as a determination of content aimed at the common needs of all adolescents, taught in large blocks of time without regard to subject matter lines. Beyond this, various interpretations of core might have included: teacher-student planning, problem-centered content, problem-solving, increased emphasis on guidance, and the use of units based on unified studies, cultural epochs, contemporary problems, or adolescent needs.[26]

The core concept was so multi-faceted that different authors could attach themselves to it for different reasons. Alberty was intrigued by the possibility of dividing learning into common and specialized areas.[27] Faunce and Bossing placed greatest emphasis on the experience-centered organization pattern.[28] And Harap, extending the core notion down to the first grade, centered his conception of it around "social living," getting along with neighbors, sharing in the work of the home and the life of the community, etc.[29]

Saylor and Alexander put the situation into perspective. The core, they said, is not a design, but certain designs lend themselves well or poorly to it. Further, core is not synonomous with general education. Rather, it is one type of plan for providing common experiences, and its details vary in different application of the core concept.[30]

Beck, Cook, and Kearney, writing on the elementary curriculum, stated that the different organization patterns overlap in practice. They preferred the use of the "developmental activity" for half the day, supplemented by drill and practice during the other half.[31] Ragan suggested that any extreme organization pattern be avoided. A child should be provided a balance during the day of logical and psychological organization patterns.[32]

1950 to 1958 was a curious period for design in the curriculum field. At the same time that progressive ideas on curriculum design were being moderated and refined, forces outside the profession were building up and getting ready to stop the progress of Progressivism. The opponents of Progressivism naturally attacked its most vulnerable aspects, and succeeded in discrediting all of Progressivism. In so doing, many of the shortcomings of the discipline-centered approach were re-

entrenched before progressive ideas had penetrated our school systems.

Curriculum engineering. Even a casual comparison of the curriculum literature of the 1940's with that of the 1950's reveals a striking difference. The latter decade was marked by a proliferation of works devoted to problems of curriculum engineering ranging from brief recommendations, regarding such things as personnel involvement, to long, well thought out proposals.

The well-known Tyler rationale, in development in the 1940's as a course syllabus, and published in 1950, merits mention here. While not a detailed plan for curriculum engineering procedures, it did provide an overview of the purposes of a curriculum system through four questions: What educational purposes should the school seek to attain? How can learning experiences be selected which are likely to be useful in attaining these objectives? How can learning experiences be organized for effective instruction? How can the effectiveness of learning experiences be evaluated?[33]

Of the three areas of curriculum engineering, planning received by far the most attention. The proposals tended not to assume the great amount of pupil involvement in planning still advocated by some extreme progressives. Rather, the works were more practical and aimed at the real world of schooling. The contributions of the authors were in four main areas. First, suggestions on the arena for planning tended to welcome input from all levels. Beauchamp saw the main arena as the individual building.[34] But others specified benefits of broader coordination. Krug allowed for state-wide production of curriculum guides.[35] And Doll favored a mixed approach that he called "centrally coordinated."[36]

The second area of planning was the involvement of personnel.

There was a continued call for more democratic participation, including input from non-school persons and groups. There was less said about pupil participation in planning.

The third area was the recommendation of specific steps in the planning task. For example, Beauchamp detailed suggestions for a five-phase process: initiating planning activities, appraising contemporary school practices, studying desirable curriculum content, establishing curriculum criteria, and writing the curriculum.[37]

The fourth area was the recommendation of specific outputs from the planning process. For example, Krug saw these as curriculum guides plus a total school program and detailed instructional aids designed to help implement the curriculum.[38]

Curriculum implementation remained a sparsely discussed subject. Some curriculums that are produced are successfully used, others lie unused. But general recommendations on usable techniques for getting curriculums implemented were not abundant. There was some further discussion of the use of workshops. And Beauchamp suggested having teachers develop resource units under the leadership of school administration.[39]

There was a continued attempt to improve curriculum evaluation, called by Saylor and Alexander the weak link in the curriculum system.[40] Beauchamp summarized the evaluation problem in three questions: Have the goals been reached? Have they been reached in the best way possible? And were they worth the effort?[41] His method of answering this question supplemented other ideas on ways to evaluate the total curriculum system, rather than just pupil achievement. An assessment of the worth of the initial goals and of the working procedures used to pursue them was called for.

One approach to curriculum evaluation that received wide discussion during this time, notably by Anderson,[42] was action research. It was advocated as a means of careful, comprehensive study of the curriculum that did not have all of the difficulties of basic research. But the techniques of curriculum evaluation were still in the formative stages. There was no process for assessing the ultimate implications of educational aims. There was little study of the effectiveness of certain content and organization selections, as Smith, Stanley, and Shores had pointed out. And assessment of the implementation of the curriculum was in an infant state.

Curriculum theory. In 1947 Herrick and Tyler, disturbed by the lack of progress in the field of curriculum theory over the twenty years since the 26th N.S.S.E. Yearbook,[43] decided to contact nine other authorities in the field in an effort to assess the current level of thinking about the major problems of curriculum theory.[44] They conceived of this area of study as a synthesis of advancements in the fields of learning and human development, in the study of society and its functioning, in the various fields of human endeavors, and in the field of instructional practices and educational organization and support, into a unified body of thought that would give perspective and direction to efforts to improve educational programs. Their effort was a "preliminary pulling away of debris"[45] so as to insure the future development of curriculum theory. Their assumption was that "educational practices based on even poor theory are more open to revision and improvement than practices based on no theory at all."[46]

The conference was held on October 16-17, 1947 at the University of Chicago. The result was a series of twelve papers on selected aspect

of curriculum theory of interest to the authors. There were three kinds of work in this monograph. There was elementary theoretical work, in definitions and classification of ideas, such as Herrick's discussion of the issues in curriculum organization. There was meta-theoretical work, as authors attempted to define the tasks of curriculum theory and provide a framework for study. For example, Barton called for development of a general theory of value. Tyler defined the curriculum in terms of relating knowledge for reinforcement, and called for relating of curriculum theory to behavior and learning theory. And Caswell highlighted the relationship of philosophy, sociology, and psychology to curriculum theory, and had recommendations regarding appropriate applications of theory.

And finally there were statements of particular positions on curriculum theory. Smith and Frick advocated the conscious management of society. MacKenzie called for an integrated social and academic curriculum design. Leonard and Dale called for an approach to sequence based on both cone development and learning psychology. Wingo defined, but also championed the activity curriculum. And Alexander gave his list of the tasks in curriculum planning and leadership roles within them.

Herrick and Tyler acknowledged that this work was not a complete treatment of curriculum theory. There was a great need at this time for a foundation for curriculum theory, and not a further listing of disparate positions. Consequently, the most valuable works in this monograph were those providing definitions, detailing the tasks of curriculum theory, and setting up frameworks for ideas, rather than those giving specific positions without a theoretical base or a body of research. To be fair, those espousing particular positions paid some attention to definitions

and organization of ideas. There was a great need for hard research on the topics discussed upon which theoretical formulations could be based.

1959 to 1965

There had been a gradually increasing demand for "basic education" in the cold war years of the 1950's. Awareness of, and paranoia about, competition with the Russians began to dominate people's minds. When the Russians launched their satellite in Fall of 1957, the concern for educating children so as to make the United States competitive led to unprecedented support from the federal government. In September, 1958 Congress passed the National Defense Education Act calling for the:

> . . . rapid correction of existing imbalances in our educational programs which have led to an insufficient proportion of our population educated in science, mathematics, and modern foreign languages and trained in technology.[47]

This relatively rapid and severe response to the launching of Sputnik the previous year was not meant to begin federal control of school curriculums, but it was inevitable that the large amounts of the kind of categorical aid that were subsequently appropriated were to shape school programs to a large extent, as well as to determine the nature of much curriculum research. Some curriculum writers altered or even reversed their positions in this wave of national committment, and those who had previously held strong views on "basic education" became more influential. The third period of this study began with the first year of the NDEA.

Although this period immediately followed the death of the Progressive Education Association and the founding of the Council for Basic Education, it is clear that there was no real return to basic education. And there was no complete reversal of the liberal tone of curriculum works. Certain Essentialist ideas were emphasized, such as a toughening

of content focused on the structure of the disciplines. But some progressive influence endured, and certainly "non-essential" subject areas remained in the curriculum proposals and even increased. The thoughts on curriculum recorded during this time reflect this diversity.

Curriculum design. The curriculum design that received greatest attention during this period was that based on the structure of the disciplines. The idea that learning occurs best when a subject or a discipline follows its own internal logic is, of course, an old one. The National Science Foundation in 1959 sponsored an intensive examination into the fundamental processes of learning. To this end, a ten day conference was arranged for September, 1959 at Woods Hole, Massachusetts.

The chairman of the conference was the psychologist, Jerome Bruner. The year following the conference he published his "chairman's report," revealing conclusions he had reached as a result of participation in this conference.[48] Bruner's conception included a broadening of the idea of transfer of training from simple skills to general principles and understandings. He saw designing curriculums according to the structure of disciplines as having four main benefits. First, it makes a subject more comprehensible. Second, the learning of formulas is an aid to human memory. Third, an understanding of general principles leads to the understanding of a wide variety of specific instances. And fourth, such a design can narrow the gap between "advanced" and "elementary" knowledge.

The main virtue of the Woods Hole Conference and of Bruner's subsequent work was that some cognizance was taken of overall implications for the curriculum whereas the early projects had been concerned with only the discipline involved. Two major shortcomings were that, first,

the concept of structure is not as easily applicable to areas outside of science, mathematics, and languages, despite token attention given to these areas at Woods Hole and in The Process of Education. Second, although the child might be able to be taught to work like a scholar, there was a too easy acceptance of the fact that his aims are or should be those of the adult scholar. If, for example, scientists can question whether most educators have enough knowledge to design science curriculums for children, it is also open to question whether scientists are able to see the role of science in the broad perspective of general education.

Despite its shortcomings, Bruner's work was an important contribution to thinking on the subject of curriculum design. It spurred a good deal of discussion in the years immediately following 1960.

Krug, writing in 1960 on the secondary school curriculum, defended the subject organization.[49] He said that much criticism of it is properly aimed not at the organization itself but at inhumane methods of teaching it.

Broudy, Smith, and Burnett in 1964 presented a new design for a secondary curriculum conceived in terms of the general education of adolescents.[50] Rejecting the organization of content with a view toward direct application because of the multiplication of subjects that this implies, they looked toward the educational value of the subjects. Attention must be paid to the hierarchy of knowledge, because some concepts and principles explain more than others do. On this basis, the authors reduced the multiplicity of courses to five strands: symbolic studies (language and mathematics), basic sciences (general science, biology, chemistry, and physics), developmental studies (of the cosmos, of insti-

tutions, and of culture), aesthetic studies (from art, literature, philosophy and religion), and molar problems (social problems).

It is interesting to observe whether adjustments in position were made by those who had written on design earlier and who came out with editions during 1958 to 1965. Beck, Cook, and Kearney in 1953 had taken a compromise approach: developmental activities half the day, and practice and drill on the subjects the other half. In 1960 they recognized the current arguments, but they still saw their proposal as a satisfactory solution.[51]

In 1960 Lee and Lee produced the third edition of a book that first appeared in 1940.[52] While conceptually organizing material into the subject areas, they believed that the experience and needs approaches were the best designs for teaching purposes. When Stratemeyer's proposal for a design based on persistent life situations first appeared, the Lees had adopted it, and they retained it in 1960.

Ragan in 1953 had taken a moderate approach, favoring an integration of various designs. In 1960 he moderated his view even more, recognizing the need of the design or designs chosen to provide for, among other things, the development of fundamental skills.[53]

Alberty and Alberty, producing their third edition in 1962, retained their advocacy of the experience approach, but saw it as a practical matter as existing side by side with the subject approach.[54]

Proposals for curriculum content were of two types. One group called for increased attention to subject matter within the disciplines. The other group did not so much argue against the "toughening" of content as call for such content to be organized in ways that took account of the psychology of the learner. They also were concerned that content based

on the humanities, social problems, and the needs of children not be excluded during this time of updating of disciplinary knowledge.

The proposals on curriculum organization from 1959 to 1965 fell along a continuum. At one extreme were some who held on to a total experience-centered notion. At the other extreme were a few who advocated completely the subject approach. But most works, new as well as previously published, in recognition of the merits and demerits of both points of view, gravitated toward moderate or mixed positions. It may be noted that advocacy of vocational education was less prominent.

A key to the reconciliation of the opposing positions was suggested by the discussion by advocates of both the discipline-centered and experience-centered approaches of process as content. The subject design had been accused of teaching facts in isolation. The experience design may have been guilty of including vocational competencies or personal needs so specific as to be transitory in value. The solution, perceived by writers at both ends of the spectrum, was to attend to the processes of learning and the relationships among elements of content. This idea was adopted, however, in different ways in line with the orientations of experience-centered and discipline-centered advocates.

Curriculum engineering. As was true of the previous period, writers of curriculum books of a general nature after 1958 increasingly included some discussion of engineering problems, ranging from brief treatments of selected topics to more extensive positions. However, the school worker desirous of attacking curriculum engineering in an organized fashion had a selection of full-length works from which to choose. There were no great shifts in the positions of the previous years, but there was a growing body of experience in curriculum work that resulted in a good deal of material on possible engineering options, resources, and

strategies.

The curriculum engineering works of 1959 to 1965 were of three basic types. There were specific, comprehensive proposals, suitable for immediate application. There were comprehensive resource books, suggesting a wide variety of procedures out of which specific plans could be assembled. And there were relatively disorganized collections of suggestions and prescriptions, with strengths in particular areas. In the face of the various approaches taken to curriculum engineering, it is clear that theoretical formulations were needed in this area as much as they were in curriculum design.

McNally and Passow in 1960 published a resource book for curriculum workers.[55] Its major contribution was a survey of historical practices in curriculum improvement, and descriptions, written by the administrators involved, of current practices. They made several concrete suggestions. Among these was the suggestion that the local school be the basic unit of curriculum improvement, with system-wide coordination of activities. They encouraged wide participation in committees, while clearly limiting the roles of lay citizens. They encouraged experimentation as a vital part of curriculum planning. And they encouraged increased attention to the neglected area of curriculum evaluation. Their suggestions on this last area, based on the idea that evaluation had to be of the process as well as of the product, were among the most valuable in the book. The evaluative criteria fell into seven areas: scope and objectives of the program, initiating program improvement activities, administration of the curriculum improvement program, organization for curriculum planning, participation in curriculum planning, procedures and techniques used in curriculum improvement, and evalua-

tion of curriculum improvement programs.

Beauchamp produced a volume that reflected an expansion of his ideas on curriculum engineering presented in 1956.[56] A major improvement was expanded material on curriculum implementation. He divided implementation procedures into two areas of responsibility: administrative leadership and teacher behaviors. He made suggestions in both areas. Administrators must behave as if they believed that the use of the curriculum is important. The superintendent, and particularly the principal, must put the full and legitimate weight of their authority behind the implementation project. The teacher must expand and concretize the instructional guide, and devise a general chronological order of activity.

A number of other books on curriculum engineering appeared during this period. Not all, however, took a broad overview of the engineering process, or suggested definite procedures for attacking the problems. Many served as resource books illuminating selected aspects of the engineering process, or were forums for authors expounding particular points of view.[57]

This work in curriculum engineering was not particularly influenced by the subject matter discussions then current. The proposals generally concerned a refinement of techniques. These techniques either were geared to the moderately progressive curriculum approaches carried over from the previous period, or they were neutral, applicable to any approach. In works discussing engineering procedures alone, neutral approaches are probably most useful, as they do not depend on the specific planning decisions for their applicability. And this period did witness the further emergence of curriculum engineering as a separate area of study.

Curriculum theory. References in the literature point to one work as being the first full-length treatise on the subject of curriculum theory, Beauchamp's Curriculum Theory.[58] Beauchamp called for scientific methods in developing educational theories, of which curriculum theory is a sub-theory. He described theory as a classification of knowledge, directing research toward predictive statements which are then organized into logico-mathematical systems. Beauchamp defined curriculum theory as a "set of related statements that give meaning to the school curriculum pointing up the relationships among its elements and directing its development, its use, and its evaluation."[59] He then suggested, but did not prescribe, various ways of defining the curriculum and its elements and relationships among the latter, and indicated the implications of this for educational practice. Beauchamp then reviewed the status of the theory-building activities in curriculum. In most cases, he reported little or no activity.

Beauchamp outlined his conception of the field of curriculum theory. It consisted of four parts: source factors (conceived role of the school, custom and tradition, etc.), operational factors (involvement of people in curriculum planning, planning techniques, etc.), design factors (definition of curriculum, selection of objectives, etc.), and curriculum practice.

This work included a model of a theory, by way of example, with filled in assumptions and postulates, definitions, and planning and design propositions. Beauchamp viewed his work as a first step, and he called for, among other things, consistent definitions of terms, the incorporation of findings from other disciplines, and increased discussion of curriculum functions and organizing elements.

Theoretical work requires the organized cooperation of many scholars. In his theoretical framework, Beauchamp was handicapped by the dispersion of work on the subject. In his specific proposals he was limited by the dearth of research on the subject, and forced to rely heavily on unorganized experience and personal judgment. The field needed to be brought together to provide a focal point for further discussions. Beside providing this anchorage, Beauchamp's most useful contribution may have been reminding prospective curriculum theorists what a general theory of curriculum really is, and pointing their efforts toward the development of a logical system aimed at improved direction of curriculum practice.

Taba produced a book with a dual function, theory and practice.[60] She made a case for the need for curriculum theory. She also deplored the antagonistic atmosphere prevailing, with proponents of opposite points of view assailing each other, such as the child-centered versus the subject-centered advocates. All polar views, she said, lacked systematic, comprehensive thinking procedures.

Taba's theoretical chapter was titled "A Conceptual Framework For Curriculum Design." She explained how the well-known approaches to curriculum design fail as theory. They have five main deficiencies. First, they use a single criterion for decisions that require many criteria. Second, they apply principles in inappropriate places. For example, learning theory should influence the organization of content, not the selection of it. Third, they leave gaps. For example, basing schooling on democratic values does not make clear the derivation of all school functions. Fourth, their objectives tend to be too ambitious. And fifth, there usually is a theoretical gap between design and

administrative considerations.

Taba proceeded to outline the nature of a curriculum design.

> Curriculum design is a statement which identifies the elements of the curriculum, states what their relationships are to each other, and indicates the principles of organization and the requirements of that organization for the administrative conditions under which it is to operate.[61]

She added that the design is supported by the curriculum theory, which establishes the sources to consider and the principles to apply.

While these two works were not the only ones done on curriculum theory during this period, they were the only large scale works. They serve to indicate the status of the field at that time. That is, the groundwork was being laid, the general terrain mapped out. And certain topics within the field of curriculum theory were being examined in depth. The dialogue was slow and difficult, however. The biggest problem lay in a lack of agreement among scholars on fundamental issues such as definitions of terms.

1966 to 1975

The space race of the 1950's and early 1960's had caused a governmentally supported imbalance in the curriculum. Science, mathematics, and modern foreign languages were receiving much more support than other areas. These also were the subjects that lent themselves most readily to the discipline-centered approach.

Reaction to this imbalance developed quickly. The 1961 ASCD yearbook discussed the problem of "balance between sciences and the humanities, between required and elective courses, between college preparatory and vocational programs, in-school and out-of-school assignments . . . ."[62]

As did the movement of the 1950's, the counter-movement soon

reached the Congress. The Vocational Education Act was passed in 1963,[63] and the Defense Education Act's restriction to math, science, and languages was stricken in 1964. But the biggest support for the humanities came in 1965 with the Elementary and Secondary Education and the National Foundation on the Arts and Humanities Acts.[64] Although the countermovement had developed over a number of years, in this study the first full year of these Acts, 1966 has been taken as the beginning of a new period of broader concerns in the curriculum.

Curriculum design. Most of the major works on curriculum design from 1966 to 1975 continued the discussion of the discipline-centered organization: definitions of it, its advantages and disadvantages, and refinements of and alternatives to it. With a few exceptions, in the context of these discussions content was assumed to be the traditional subjects.

Both the extreme subject- and experience-centered designs, it had become clear, were unsatisfactory. Yet proponents of both sides could present arguments in their favor and point out deficiencies in the other position. A design was needed that could take advantage of the contributions of each approach. However, such a rapprochement was possible only to a point. It is one thing to cooperate in the approach to common aims, but where those aims were fundamentally at odds, cooperation is difficult. Specifically, some liberal educators differed with some conservatives on the role of the schools in such areas as the social, psychological, and vocational development of students. Some felt that the home and church had always been educators. Recently, the media and other non-school agencies had become powerful educative forces. Therefore, the school should limit its role to the intellectual sphere, and stop trying to do everything. Others felt that the school still could

be the most potent force for change in children, and called for it not to shirk its non-intellectual responsibilities.

Consequently, we find the writers on curriculum design after 1965 falling into two camps: the neo-discipline-centered group, which defended the conservative approach while attempting to deal with its shortcomings, and the group that attempted to incorporate the advantages of discipline-centeredness into a design that included concern for children's needs and social trends. A scholar's position in one of these two camps was a result of two considerations: one technical, that is, choosing the design which is more efficient, and one philosophical, that is, choosing the design which pursues the proper aims of schooling.

The existence of these two groups was not new to the late 1960's. The new trends included, first, a maturing of the discussion on the new idea of discipline-centeredness that was inspired by the brief treatment given by Bruner in 1960.[65] Second, there came about the final abandonment of works on design that did not try to incorporate contributions that could be made by disciplinary structure. In this section the advocates of the disciplines will be treated first.

King and Brownell in 1966 presented a primarily theoretical work, but one whose main design implication was a case against occupational, political, social, or religious bases for the curriculum, in favor of the intellectual.[66]

Alpren rejected the logical psychological dichotomy in design. He also commented on the issue of discrete vs. interrelated subjects. He saw a three-stage hierarchy of learning tasks, from simple to complex: the learning of basic knowledges from the disciplines, the learning of relationships of knowledges within a subject, and the learning of interdisciplinary relationships. He maintained that to aim for interdisciplinary understanding is often to set one's sights too high. He

believed that the curriculum design should provide for the basics as much as possible, and that integration can often be accomplished in the teaching process or within the learner himself.[67]

Parker and Rubin, while favoring the disciplines, wrote with the intention of reforming them to make them more relevant and useful. They felt that the discipline-centered approach often stresses the unimportant, wastes a lot of effort, makes insufficient use of knowledge about the nature of learning, and does not take enough cognizance of individual differences.[68]

As late as 1972, Beckner and Cornett gave a vigorous defense of the subject-centered design for the secondary curriculum. Their main criticisms of other designs were that attempting to satisfy individual student desires may overemphasize practical use and severely limit basic knowledge about a subject, and excessive attention to local or national social demands may cause a severe limitation of attention to certain disciplines or to a type of organization leading toward a basic understanding of subject matter.[69]

These authors and others in general agreed that, taking care to deal with certain possible abuses and limitations, the structure of the discipline is sufficient to provide for the major aims of schooling. An equally vocal group, however, stressed its belief that at the least the disciplines approach must be supplemented by other approaches which can fulfill other necessary aims.

Inlow agreed that the disciplines have value in transmitting the culture and in nurturing individual development.[70] But then he at length established that the disciplines were an insufficient source for all of the aims of schooling. The problems include: difficulty of selection from a large number of disciplines, lack of evidence that the disci-

plines are relevant to learners in the early grades, difficulty of integration of knowledge, conflict in curriculum authority between subject matter scholars and educators, and lack of attention to personality development and other humanistic roles of the schools. The totality of learning, Inlow said, should include a number of emergent and humanistic areas of content.[71]

Saylor and Alexander described the uses of a number of designs, based on the disciplines, social activities and problems, process skills, and on individual needs and interests. They stated that the exclusive use of the subject design fails to put sound theory into practice. They recommended the selection of one or more designs appropriate to the implementation of learning opportunities within each "curriculum domain," or broad area of educational goals.[72]

Tanner reviewed the new inquiry-discovery approach to study of the disciplines in the secondary school, and he listed five shortcomings related to the learning style of the adolescent, the multiplicity of areas of knowledge, delayed commitment to a vocation, the need for a variety of activities, and the need to relate knowledge and synthesize learnings from disparate fields.[73]

It is important to note that advocates of both positions to some extent saw merit in the other point of view. Some of those favoring the disciplines acknowledged the need for more attention to relevance and to such humanistic concerns as creativity, problem solving, and values. And the other group acknowledged the necessity, in the face of the explosion of knowledge in all academic areas, of making use of the efficiency of the disciplinary approach where appropriate.

Curriculum engineering. As in the previous period, material on curri-

culum engineering after 1965 was disseminated in books with several formats. General books on curriculum often had sections on engineering aspects. But notwithstanding some valuable contributions made in this way, there continued a growing realization that the problems of curriculum engineering were complex enough that they demanded extended treatments of their own. Such books were of two types. First, there were fully worked out, implementable programs. Books of this type contained the particular authors' constructions of programs based on their perceptions of the best knowledge available from theory and practice. The second type was source books. They either consisted of background information in a particular area or areas to be considered by the curriculum worker, or they were in the form of a symposium, with a number of shorter works by various people on selected topics. The first type served to help the curriculum worker begin the practical work of schooling. The second type helped advance the field of curriculum, providing input to curriculum theory, and bridging theory and practice.

Treatments of curriculum planning had become a good deal more sophisticated in this period. Experience and discourse in the literature had produced a wealth of described procedures and usable courses of action for the curriculum planner. Information was available on impinging forces to be considered prior to planning, summaries of relevant curriculum theories, and step-by-step procedures for organizing and executing a curriculum system for the various possible planning arenas.

Neagley and Evans discussed various forces extrinsic to the curriculum that must be considered preliminary to curriculum planning. They then outlined the steps in curriculum planning on two levels, district and local. On the district level, the steps were: identifying values

and developing a philosophy and a set of objectives, identifying desirable learning experiences and student behaviors, consideration of controversial issues, and obtaining the help of curriculum consultants. On the local level, the steps were: preliminary evaluation of the present curriculum, studying recent research, and selecting and organizing content, including the writing of a flexible curriculum guide, that is, a guide that employs different formats for different areas of the curriculum, and allows for constant revision.[74]

Saylor and Alexander also wrote a plan for a complete engineering system. It differed from the work of Neagley and Evans in its lengthy treatment of selection of designs, and in its discussion of various theoretical models of curriculum systems. On planning, the authors described a number of options from which a curriculum planning group could choose those procedures most appropriate to his situation. These were organized into four areas: processes and roles, sources of data, goals and objectives, and curriculum designs.[75]

A book on engineering that focused on a particular point was written by Verduin. He made an extended case for the advantages of curriculum development as a cooperative effort by the staff over that based on work of the experts. He also detailed procedures for cooperative curriculum planning and evaluation.[76]

On curriculum implementation, Neagley and Evans gave some implementation suggestions related to teacher training and plant adaptation.[77]

Curriculum evaluation began to be more scientific, as the long-proclaimed belief in the need for comprehensive evaluation began to be supported by practical plans for the same, plus detailed discussion of the purposes of formative and summative evaluation, and the methods of

statistics and research as applied to curriculum evaluation.

Neagley and Evans called for replacement of subjective with objective measurement techniques, evaluation in terms of goal attainment, evaluation of student behaviors, with students participating, evaluation of the total program on a K-12 basis, evaluation of the process of curriculum development and staff competency in this regard, review of consultant services, and review of professional growth.[78]

Saylor and Alexander discussed new trends in curriculum evaluation, particularly the inclusion of both formative evaluation of the curriculum itself and summative evaluation of the results obtained. Their own program was a five-step process of evaluation of: goals, subgoals and objectives, the total school program, specific segments of the curriculum, the instructional procedures, and the evaluation of the evaluation procedures. All are to be done formatively and summatively.[79]

Beside the curriculum evaluation recommendations mentioned in works such as these, there was an increasing concern with the improvement of curriculum evaluation that inspired smaller, intensive studies of the topic. Two of these merit mention here. They were monographs commissioned by the American Educational Research Association, edited by Tyler [80] and Grobman.[81] These works applied the current conceptions of formative and summative evaluation, that is, evaluation of the process and the product, to the curriculum. This general topic was not new, but study of it had become more intensive. Other areas discussed in the monographs were the techniques of evaluation, including sample size, experimental design, data collection, tests, etc., and the general problem of the enormity and cruciality of curriculum evaluation.

The concern with the problems of curriculum evaluation continues.

One view of the state of the art can be seen in an anthology of articles, by educators, psychologists, data analysts, etc., edited by Payne in 1974. Included were articles on the overview of the purposes of curriculum evaluation, the task of identifying relevant curriculum objectives, planning the design of evaluation studies, measurement techniques, and descriptions of existing practices.[82]

Ideas on curriculum implementation did not advance much, except for a growing realization that continuous teacher involvement in development of the curriculum and training in its use is important to effective implementation, as is administrative leadership overseeing the process of implementation.

Curriculum theory. After 1965 there was a marked acceleration in discussion of and work in curriculum theory. Some authors put the word "theory" into the titles of their books without really presenting any theoretical work or even reviewing in an organized way the theoretical work of others. However, there were a number of works which contributed significantly to the field. These works were of three types. There were books on curriculum which included a chapter or two on orientation to curriculum theory, sometimes including a partial theoretical position. Examples included Neagley and Evans,[83] Saylor and Alexander,[84] Wilson,[85] and Gwynn and Chase.[86] The second type included shorter works and articles, usually on selected aspects of curriculum theory, appearing singly or in collection, the third type consisted of full length expositions of the field.

Goodlad and Richter in 1966 saw the need for a "conceptual system" as an initial step preliminary to theoretical work in curriculum and instruction. They said that a "conceptual system" is more general

than a theory in that it may nurture a variety of theories covering parts of a system, and that it is neutral with respect to specific hypotheses. They listed five tasks performed by a conceptual system: 1) identification of the levels of decision-making, such as the instructional, the institutional, the societal, and ideological; 2) elaboration of the decisions at each level; 3) specification of the type of decision at each level and between levels such as transactional and deductive decisions; 4) identification of data sources for each type of decision; and 5) clarification of responsibility for decisions.[87]

After defining some terms, the authors presented a chart describing the flow of curriculum decisions. Values are the ultimate source. A sanctioning body or individual selects from these values, and a controlling agency determines the educational aims from them. From these the professional staff selects educational objectives and learning opportunities. Finally the teachers select the "organizing centers" or specific instructional applications of the objectives, and implements these with the learners. Feedback goes on at every level, and all levels receive data from funded knowledge and conventional wisdom.[88]

The second edition of Beauchamp's Curriculum Theory appeared in 1968, and it remained one of its kind.[89] Beauchamp further clarified the position of curriculum theory among other theories in education, such as counseling, instructional, and evaluation theories. He suggested tentative sub-theories to curriculum in design, planning, implementation, and evaluation. He also discussed various meanings of the word "curriculum:" as a curriculum system, as a field of study, and as a curriculum or a substantive document.

Discussing curriculum as a field of study, Beauchamp offered two main conclusions. First, while there is general agreement on what are

the broad concerns of the field of curriculum, there are far too few careful definitions of fundamental concepts and attempts to get agreement on them for purposes of fruitful discussion. Second, there is far too little careful research done to test hypotheses and provide a basis in research for curriculum statements.

Between the first and second editions, there was not the volume of discourse on curriculum theory that Beauchamp had hoped for, and the latter volume per force remained largely meta-theoretical, refining his conceptual framework and setting forth propositions based on such meager research as there was available, plus certain postulates and assumptions. As he pointed out, experience in such areas as curriculum implementation and evaluation is severely limited, and much must be inferred logically. At the outset, Beauchamp stated that any theory consists of events of known, assumed, and unknown dimensions. In curriculum theory, the assumed and the unknown are extensive.

In the third edition of Curriculum Theory, Beauchamp pulled together his definitions, postulates, assumptions, and generalizations from research into one chapter, "The Nucleus of a Curriculum Theory."[90]

Theories are not the same as positions, but since curriculum is an applied field, the distinction sometimes gets blurred. And it is not expected that curriculum theory should have the mathematical precision of theory in the physical sciences. Still, treatments of what an author chooses to call "curriculum theory" should at least attempt either to organize what they see as a unified field, or to describe the total field which they will treat partially. Then those authors should engage in genuine theory-building activity.

FOOTNOTES

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[22]Op. cit.

[23]Op. cit.

[24]E.g. Lee and Lee, op. cit., 2d ed., 1950; Alberty, op. cit., 2d ed. with Elsie J. Alberty, 1953; and Stratemeyer, et. al., op. cit., 2d ed., 1957.

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